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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/408,114	09/29/1999	ERICK M. HIRATA	PD-R98160	3614

7590 08/23/2004  
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EXAMINER
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
LE, DINH THANH

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/408,114	<b>Applicant(s)</b> HIRATA ET AL.	
	<b>Examiner</b> DINH T. LE	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8,11-14 and 17 is/are rejected.
- 7) ☒ Claim(s) 5-7,9,10,15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |                                                                                              |                                                                             |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

Art Unit: 2816

## NON-FINAL REJECTION

### *Response to Applicant's Amendment*

The rejection over Matsuda et al (US 5,412,380) has been withdrawn since claim 18 was canceled.

The prior art newly found necessitated a new ground of rejection is below:

### *Claim Objection*

Claim 3 remains objected to because it depends on canceled claim 2. Correction is required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 11-12 and 17 are rejected under 35 USC 103 (a) as being unpatentable over Long et al (US 4,984,249) in view of Itoh (US 5,786,839).

Long et al discloses in Figures 3B, 4 and 7 a circuit comprising:

- a monolithic substrate;
- a plurality of electrical inputs (110);
- a plurality (320, 322, 324) of electrical outputs;
- a switch means(1-3) for selectively interconnecting said inputs (110) to said outputs

(320, 322, 324), said switch means having 3 multiplexers; and

- means (138, Figure 4) for controlling said switch means (1-3)

However, Long et al does not disclose that the switch means (1-3) and the controlling means (138) are implemented on a substrate. Itoh teaches in Figure 2 an integrated circuit comprising a controlling means (115) and a multiplexer (116) are formed on an integrated circuits in a IC chip having a substrate (311, Figure 3B) for reducing size. It would have been obvious to a person having skilled in the art at the time the invention was made to formed the multiplexers and the controlling means of Long et al on an IC chip as taught by Itoh for the purpose of reducing physical size.

With regard to claim 11, employing a shift register for controlling the multiplexer is suggested by Itoh as the register (115) in Figure 2.

Claims 4, 8 and 13-14 are rejected under 35 USC 103 (a) as being unpatentable over Long et al (US 4,984,249) and further in view of Elabd (US 5,420,534).

Long et al in view of Itoh discloses a modified multiplexer circuit with all of the limitations of the claims invention as discussed above but does not disclose the switchable amplifiers. Elabd teaches in Figure 1 a multiplexer circuit comprising switches for selecting the inputs and the unmarked buffer amplifiers at input terminals (12-1 to 12-4) for providing an isolation between the input signals and the switch (10). It would have been obvious to a person having skill in the art at the time the invention was made to employ the switchable amplifiers taught by Elabd in the modified circuit of Long et al for the purpose of selecting the input signals and isolating the inputs from the multiplexers.

***Allowable Subject Matter***

Claims 5-7, 9-10 and 15-16 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The claim is allowable because the prior art does not show that each multiplexer includes N selection multiplexers and a means for summing the outputs of said N buffers to provide a single output.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
DINH T. LE  
PRIMARY EXAMINER